

**PROPOSED**

Amended Date

**CERTIFIED MAIL**  
**RETURN RECEIPT REQUESTED**  
(xxxx xxxx xxxx xxxx xxxx)

12-xxxE CAB  
File No. 0686-02

Mr. Lawrence G. Ornellas  
Manager, Generation  
Hawaiian Electric Company, Inc. (HECO)  
P. O. Box 2750  
Honolulu, Hawaii 96840

Dear Mr. Ornellas:

**Subject: Amendment of Covered Source Permit (CSP) No. 0686-01-C  
Significant Modification Application No. 0686-02  
Hawaiian Electric Company, Inc. (HECO)  
Honolulu International Airport Dispatch Standby Generators  
Located at: Rodgers Boulevard, Honolulu, Hawaii  
Date of Expiration: December 10, 2013**

In accordance with Hawaii Administrative Rules, Chapter 11-60.1, and pursuant to your application for a Significant Modification dated November 3, 2011, the Department of Health hereby amends Covered Source Permit (CSP) No. 0686-01-C issued to HECO. The amendment authorizes the use of biodiesel as a primary fuel.

The enclosed Attachment II supersedes in its entirety the corresponding Attachment II issued with CSP No. 0686-01-C on December 11, 2008. All other permit conditions issued with CSP No. 0686-01-C shall not be affected and shall remain valid. A receipt for the application filing fee of \$1000.00 is enclosed.

If there are any questions regarding these matters, please contact Mr. Darin Lum of the Clean Air Branch at (808) 586-4200.

Sincerely,

STUART YAMADA, P.E., CHIEF  
Environmental Management Division

DL:smk

Enclosures

c: CAB Monitoring Section

**ATTACHMENT II: SPECIAL CONDITIONS  
DIESEL ENGINE GENERATORS  
COVERED SOURCE PERMIT NO. 0686-01-C**

**Amended Date:**

**Expiration Date: December 10, 2013**

In addition to the Standard Conditions of the Covered Source Permit, the following emissions unit(s) is subject to the Special Conditions listed below:

**Section A. Equipment Description.**

1. This permit encompasses the following equipment and related appurtenances:

Four (4) 2.5 MW Caterpillar Model 3516C-HD diesel engine generators equipped with ACERT Technology.

(Auth.: HAR §11-60.1-3)

2. An identification tag or name plate shall be displayed on each diesel engine generators to show model no., serial no., and manufacturer. The identification tag or name plate shall be permanently attached to the diesel engine generators in a conspicuous location.

(Auth.: HAR §11-60.1-5, §11-60.1-90)

**Section B. Applicable Federal Regulations.**

The diesel engine generators are subject to the provisions of the following federal regulations:

1. 40 CFR Part 60, Standards of Performance for New Stationary Sources, Subpart A, General Provisions;
2. 40 CFR Part 60, Standards of Performance for New Stationary Sources, Subpart IIII, Standards of Performance for Stationary Compression Ignition Internal Combustion Engines;
3. 40 CFR Part 63, National Emission Standards for Hazardous Air Pollutants for Source Categories (Maximum Achievable Control Technologies (MACT) Standards), Subpart A, General Provisions; and
4. 40 CFR Part 63, National Emission Standards for Hazardous Air Pollutants for Source Categories (Maximum Achievable Control Technologies (MACT) Standards), Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines.

The permittee shall comply with all applicable provisions of these standards, including all emission limitations and all notification, testing, monitoring, and reporting requirements. The major requirements of these standards are detailed in the special conditions of this permit.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-161, 40 CFR §60.1, §60.4200, §63.1, §63.6585)<sup>1</sup>

**Section C. Emission and Operational Limitations, and/or Standards.**

1. Fuel Limits

- a. The diesel engine generators shall be fired only on diesel no. 2, biodiesel (B100), and blends of biodiesel (B100) and diesel no. 2 with:
  - i. A maximum sulfur content of 0.0015% by weight; and
  - ii. A cetane index or aromatic content as follows:
    - 1) Minimum cetane index of 40; or
    - 2) Maximum aromatic content of 35 volume percent.
- b. The total combined fuel consumption of diesel no. 2, biodiesel (B100), and blends of biodiesel (B100) and diesel no. 2 for the four (4) diesel engine generators shall not exceed 1,562,276 gallons per any rolling twelve (12) month period.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-90, 40 CFR §60.4207, §63.6590)<sup>1</sup>

2. For any six (6) minute averaging period, the diesel engine generators shall not exhibit visible emissions of twenty (20) percent opacity or greater, except as follows: during start-up, shut-down, or equipment breakdown, the diesel engine generators may exhibit visible emissions greater than twenty (20) percent opacity, but not exceeding sixty (60) percent opacity for a period aggregating not more than six minutes in any sixty (60) minutes.

(Auth.: HAR §11-60.1-3, §11-60.1-32, §11-60.1-90)

3. The diesel engine generators shall be properly maintained and kept in good operating condition at all times with scheduled inspections and maintenance as recommended by the manufacturer or as needed.

(Auth.: HAR §11-60.1-3, §11-60.1-90, 40 CFR §60.4211)<sup>1</sup>

4. Alternate Operating Scenarios.

The terms and conditions under the following alternate operating scenarios shall meet all applicable requirements including all conditions of this permit. Requests for written approval to operate under the applicable alternate operating scenario shall be in accordance with Attachment II, Special Condition No. E.6.

- a. Temporary Replacement. The permittee may replace the diesel engine generators with an equivalent temporary replacement unit with equal or lesser emissions in the event of a failure or major overhaul of the equipment.

- b. Alternate Fuels. The permittee may fire the diesel engine generators on an alternate fuel provided all conditions of the Covered Source Permit are complied with including compliance with the NAAQS/SAAQS and with prior written approval from the Department of Health.

(Auth.: HAR §11-60.1-3, §11-60.1-68, §11-60.1-90)

5. The permittee shall not discharge or cause the discharge into the atmosphere from the diesel engine generators in excess of the following emission rates:

<b><u>Pollutant</u></b>	<b><u>Emission Limit (3-hr Avg.)</u></b>
Nitrogen Oxides (NO <sub>x</sub> )	54.8 lb/hr

The Department of Health may lower the allowable emission limitation for NO<sub>x</sub> after reviewing the initial performance test results required under Attachment II, Special Conditions, Section F.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-90)

6. The exhaust stacks for the four (4) diesel engine generators shall each be increased to a total stack height of 87.5 feet.

(Auth.: HAR §11-60.1-3, §11-60.1-5, §11-60.1-90)

**Section D. Monitoring and Recordkeeping Requirements.**

1. Non-resetting volumetric fuel flow meter(s) shall be installed and maintained in good operating condition for the permanent recording of the total gallons of diesel no. 2, biodiesel (B100), and blends of biodiesel (B100) and diesel no. 2 fired in the four (4) diesel engine generators.

(Auth.: HAR §11-60.1-3, §11-60.1-90)

2. The permittee shall maintain records on the following items:

- a. Fuel consumption. Records for the non-resetting volumetric fuel flow meter(s) shall include:

- i. Date of meter readings;
- ii. Beginning and ending meter readings for each month; and
- iii. The total gallons of diesel no. 2, biodiesel (B100), and blends of biodiesel (B100) and diesel no. 2 fired in the four (4) diesel engine generators on a monthly and rolling twelve (12) month basis;

- b. Fuel delivery receipts, showing the fuel type, sulfur content (percent by weight), cetane index or aromatic content (volume percent), date of delivery, and gallons of fuel delivered to the site for the diesel engine generators shall be maintained. Fuel sulfur content, cetane index, and aromatic content may be demonstrated by providing the supplier's fuel specification sheet for the type of fuel purchased and received;
- c. Records on inspections, maintenance, and any repair work conducted on the diesel engine generators. At a minimum, these records shall include: the date of the inspection/work; name and title of personnel performing inspection/work; a short description of the action and/or any such repair work; and a description of the part(s) inspected or repaired; and
- d. Records of any alternate operating scenarios as required by Attachment II, Special Condition No. D.4.

(Auth.: HAR §11-60.1-3, §11-60.1-11, §11-60.1-90, 40 CFR §60.4214)<sup>1</sup>

3. Visible Emissions (VE)

- a. Except in those months where VE observations are conducted by a certified reader for the annual observations of each diesel engine generator, the permittee shall conduct **monthly** (calendar month) VE observations of each diesel engine generator in accordance with 40 CFR Part 60, Appendix A, Method 9 or by use of a Ringelmann's Chart as provided. For each month, two (2) consecutive six (6) minute observations shall be taken at fifteen (15) second intervals. Records shall be completed and maintained in accordance with the **Visible Emissions Form Requirements**.
- b. The permittee shall conduct **annually** (calendar year), VE observations for each diesel engine generator by a certified reader in accordance with 40 CFR Part 60, Appendix A, Method 9. For the annual observation, two (2) consecutive six (6) minute observations shall be taken at fifteen (15) second intervals. Records shall be completed and maintained in accordance with the **Visible Emissions Form Requirements**.
- c. Upon written request and justification by the permittee, the Department of Health may waive the requirement for the annual VE observations of the diesel engine generators. The waiver request is to be submitted prior to the required annual VE observation and must include documentation justifying such action. Documentation should include, but is not limited to, the results of the prior VE observations indicating compliance by a wide margin, documentation of continuing compliance, and further that observations of the source have not changed since the previous annual VE observation.

(Auth.: HAR §11-60.1-3, §11-60.1-32, §11-60.1-90)

4. Alternate Operating Scenarios

- a. The permittee shall contemporaneously with making a change from one operating scenario to another in accordance with Attachment II, Special Condition No. C.4, record in a log at the permitted facility the scenario under which it is operating.

- b. The permittee shall maintain all records corresponding to the implementation of an Alternate Operating Scenario specified in Attachment II, Special Condition No. C.4.

(Auth.: HAR §11-60.1-3, §11-60.1-68, §11-60.1-90)

5. All records, including support information, shall be true, accurate and maintained for at least **five (5) years** from the date of any required monitoring, recordkeeping, testing, or reporting. Support information includes all maintenance, inspection, and repair records and copies of all reports required by this permit. These records shall be in a permanent form suitable for inspection and made available to the Department of Health or their representative upon request.

(Auth.: HAR §11-60.1-3, §11-60.1-11, §11-60.1-90)

**Section E. Notification and Reporting Requirements.**

1. Notification and reporting pertaining to the following events shall be done in accordance with Attachment I, Standard Condition Nos. 14, 17, and 24, respectively:
  - a. *Anticipated date of initial start-up, actual date of construction commencement, and actual date of start-up;*
  - b. *Emissions of air pollutants in violation of HAR, Chapter 11-60.1 or this permit (excluding technology-based emission exceedances due to emergencies); and*
  - c. *Permanent discontinuance of construction, modification, relocation, or operation of the facility covered by this permit.*

(Auth.: HAR §11-60.1-8, §11-60.1-15, §11-60.1-16, §11-60.1-90)

2. The permittee shall report within **five (5) working days** *any deviations from permit requirements*, including those attributable to upset conditions, the probable cause of such deviations and any corrective actions or preventative measures taken. Corrective actions may include a requirement for more frequent monitoring, or could trigger implementation of a corrective action plan.

(Auth.: HAR §11-60.1-3, §11-60.1-15, §11-60.1-16, §11-60.1-90)

**3. Monitoring Reports**

The permittee shall submit **semi-annually** the following written report to the Department of Health for monitoring purposes. The report shall be submitted within **sixty (60) days** *after the end of each semi-annual calendar period (January 1 to June 30 and July 1 to December 31)* and shall include the following:

- a. The total combined fuel consumption (gallons) of diesel no. 2, biodiesel (B100), and blends of biodiesel (B100) and diesel no. 2 for the four (4) diesel engine generators on a monthly and rolling twelve (12) month basis. Also the type of fuel fired, maximum

sulfur content (percent by weight), minimum cetane index and maximum aromatic content (volume percent). The enclosed **Monitoring/Annual Emissions Report Form: Fuel Consumption**, shall be used for reporting.

- b. Any opacity exceedances as determined by the required VE monitoring. Each exceedance reported shall include the date, six (6) minute average opacity reading, possible reason for exceedance, duration of exceedance, and corrective actions taken. If there are no exceedances, the permittee shall submit in writing a statement indicating that for each equipment there were no exceedances for that semi-annual period.

The enclosed **Monitoring Report Form: Opacity Exceedances** shall be used.

- c. Any deviations from permit requirements shall be clearly identified.

(Auth.: HAR §11-60.1-3, §11-60.1-32, §11-60.1-90)

#### 4. Annual Emissions Reports

As required by Attachment IV and in conjunction with the requirements of Attachment III, Annual Fee Requirements, the permittee shall submit on an **annual basis** the total tons per year emitted of each regulated air pollutant, including hazardous air pollutants. The reporting of annual emissions is due within **sixty (60) days after the end of each calendar year**. The enclosed **Monitoring/Annual Emissions Report Form: Fuel Consumption**, shall be used in reporting.

Upon the written request of the permittee, the deadline for reporting annual emissions may be extended if the Department of Health determines that reasonable justification exists for the extension.

(Auth.: HAR §11-60.1-3, §11-60.1-90, §11-60.1-114)

#### 5. Compliance Certification

During the permit term, the permittee shall submit at least **annually** to the Department of Health and U.S. EPA, Region 9, the attached **Compliance Certification Form**, pursuant to HAR §11-60.1-86. The permittee shall indicate whether or not compliance is being met with each term or condition of this permit. The compliance certification shall be submitted **within ninety (90) days after the end of each calendar year**, and shall be signed and dated by a responsible official. The compliance certification shall include, at a minimum, the following information:

- a. The identification of each term or condition of the permit that is the basis of the certification;
- b. The compliance status;
- c. Whether compliance was continuous or intermittent;
- d. The methods used for determining the compliance status of the source currently and over the reporting period;

- e. Any additional information indicating the source's compliance status with any applicable enhanced monitoring and compliance certification including the requirements of Section 114(a)(3) of the Clean Air Act or any applicable monitoring and analysis provisions of Section 504(b) of the Clean Air Act; and
- f. Any additional information as required by the Department of Health including information to determine compliance.

Upon written request of the permittee, the deadline for submitting the compliance certification may be extended, if the Department of Health determines that reasonable justification exists for the extension.

(Auth.: HAR §11-60.1-4, §11-60.1-86, §11-60.1-90)

6. Alternate Operating Scenarios:

- a. Temporary Replacement. Within **thirty (30) days** of commencement of the temporary replacement, the permittee shall submit in writing to the Department of Health, the reason for the temporary replacement, removal and return dates, and the make, model, and serial number of the existing and temporary replacement units.
- b. Alternate Fuels. In requesting for approval to fire alternate fuels, the permittee shall at a minimum, provide the Department of Health with information on the type of fuel proposed, reason for using the alternate fuel, and emissions data. The Department of Health may require an ambient air quality impact assessment for firing the alternate fuel and/or provide a conditional approval to impose additional monitoring, testing, recordkeeping, and reporting requirements.

(Auth.: HAR §11-60.1-4, §11-60.1-86, §11-60.1-90)

**Section F. Testing Requirements.**

1. Initial Performance Tests

The permittee shall conduct or cause to be conducted initial performance tests within **one (1) year** of startup and subsequent performance tests every **8,760 hours** of operation or **three (3) years**, whichever comes first, on the diesel engine generators for NO<sub>x</sub>, CO, PM/PM<sub>10</sub>, and VOCs in accordance with 40 CFR Part 60, Section 60.4211(g)(3). The performance test shall be performed within 10% of peak load or the highest achievable load and shall consist of three (3) separate one-hour runs. For the purposes of determining compliance with the applicable NTE standards, the arithmetic mean of the results from the three (3) runs shall apply.

(Auth.: HAR §11-60.1-3, §11-60.1-11, §11-60.1-90, 40 CFR §60.4211)<sup>1</sup>



2. Performance Test Methods

The performance test shall be conducted and the results reported in accordance with the test methods set forth in 40 CFR Part 60, Subpart IIII or EPA-approved alternative test methods.

(Auth.: HAR §11-60.1-3, §11-60.1-11, §11-60.1-90, 40 CFR Part 60, Subpart IIII)<sup>1</sup>

3. Performance Test Plan

At least **thirty (30) days** prior to performing a test, the permittee shall submit a written performance test plan to the Department of Health and U.S. EPA, Region 9, that includes the date(s) of the test, test duration, test locations, test methods, source operation, and other parameters that may affect test results. Such a plan shall conform to EPA guidelines including quality assurance procedures. A test plan that does not have the approval of the Department of Health may be grounds to invalidate any test and require a retest.

(Auth.: HAR §11-60.1-4, §11-60.1-86, §11-60.1-90, 40 CFR §60.8)<sup>1</sup>

4. Performance Test Report

Within **sixty (60) days** after completion of the performance test, the permittee shall submit to the Department of Health and U.S. EPA, Region 9, the test report which shall include the operating conditions of the diesel engine generators at the time of the test, the analysis of the fuel, the summarized test results, comparative results with the not-to-exceed (NTE) standards for each pollutant in accordance with 40 CFR Part 60, Section 60.4212.

(Auth.: HAR §11-60.1-4, §11-60.1-86, §11-60.1-90, 40 CFR §60.8, §60.4212)<sup>1</sup>

**Section G. Agency Notification.**

Any document (including reports) required to be submitted by this permit shall be done in accordance with Attachment I, Standard Condition No. 28.

(Auth.: HAR §11-60.1-4, §11-60.1-90)

<sup>1</sup>The citations to the Code of Federal Regulations (CFR) identified under a particular condition, indicate that the permit condition complies with the specified provision(s) of the CFR. Due to the integration of the preconstruction and operating permit requirements, permit conditions may incorporate more stringent requirements than those set forth in the CFR.

<sup>2</sup>The citations to the State Implementation Plan (SIP) identified under a particular condition, indicate that the permit condition complies with the specified provision(s) of the SIP.